JAN 08 2009

PATENT
Attorney Docket No. 02814-0081

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
)
Kevin Blann   )
) Group Art Unit: 1796
Application No.: 10/539,137   )
) Examiner: C. Caixia Lu
Filed: April 7, 2006   )
)
For: Trimerisation of Olefins   )
)
) Confirmation No.: 2745

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

RULE 132 DECLARATION

I, DAVID HEDLEY MCCANN do hereby declare that I am a citizen of South Africa, residing at 65 LA PECLA WENNING ST, VANDERBIJLPARK . That I received a MASTER OF SCIENCE (M.S.) degree from UNIVERSITY OF PORT ELIZABETH in 1992 . That I have been employed by Sasol Technology (PTY) Limited, a Corporation of South Africa and the assignee of record of the above-identified application, since 1993 . That recently I have been engaged in research activities relating to the development of processes for the trimerization of olefins.

I am familiar with the history of prosecution of this application (published as US 2006-0211903) and specifically the Examiner's opinion that the claims are unpatentable under 35 U.S.C. §103(a) for being obvious over WO03/053891 (US 2005/0119516).

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To show that the claimed invention relating to a process for the trimerization of olefins, wherein, inter alia, two or more of R^1, R^2, R^3 and R^4 of the heteroatomic ligand are aromatic or hetero-aromatic groups containing at least one non-polar constituent on the atom adjacent to the atom bound to phosphorus is not obvious in view of this reference, I conducted a comparison of the results of examples of the present application with that of WO03/053891 (US 2005/0119516) as set forth in the attached Appendix consisting of two pages.

The results presented in the Examples of WO03/053891 and this application have not been reported in a format which is directly comparable to another, but they can readily be calculated from the description. Two important criteria of catalyst performance, namely, its efficiency and activity, have been calculated by me from the examples provided and is attached hereto in table format in the Appendix. The examples of WO03/053891 resembling the disclosure in [0027] of US 2005/0119516 relied on by the Examiner, are Examples 3 and 4. The total product activity of this catalyst as shown on page 2 of the Appendix calculated from Examples 3 and 4 is 4676 and 9511 g/g/Cr/hr respectively. When this is compared to the total product activity of the Examples of the present application which range from 35169 to 324043, the unexpected results are evident. This improvement in catalyst activity is indeed unexpected as there is no teaching in WO03/053891 that such a vast improvement could be expected through the specific substitution pattern claimed in the present application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and

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further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: ___c‑7 / c‑i / c‑q___   By: _____

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APPENDIX

Calculation of efficiencies and activities from patent examples

Examples from US2006/0211903A1

Example	mmoles Cr	mass Cr mg	mass prod g	mass poly g	mass total prod g	total product efficiency g/g Cr
2	0.033	1.72			69.35	40415
3	0.022	1.14			102.6	89513
4	0.033	1.72			42.08	40977
5	0.033	1.72			17.66	10292
6	0.012	0.62			32.16	54018
7	0.033	1.72			87.4	50953
8	0.033	1.72			70.7	41120
9	0.033	1.72			78.85	46063
10	0.033	1.72			57.68	33814
11	0.01	0.52			51.23	98510
12	0.033	1.72			46.27	26964
13	0.021	1.09			18.89	18166
14	0.033	1.72			37.53	21875
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Examples from US2005/0119516A1

Example	mmoles Cr	mass Cr mg	mass prod g	mass poly g	mass total prod g	total product efficiency g/g Cr
1	0.0449	2.33	0.12	0.12	0.24	103
3	0.0402	2.09	4.88	0.007	4.887	2338
4	0.011	0.57	2.25	0.28	2.72	4756
7	0.0108	0.56	8.81	0.063	8.873	15801
8	0.0118	0.61	13.07	0.045	13.115	21376
9	0.013	0.68	0.42	0.12	0.54	799
10	0.0113	0.59	7.31	0.16	7.86	13377
11	0.05	2.60	11.89	0.24	12.13	4666

run time h	total product activity g/g Cr/h
0.25	161660
0.50	178026
0.17	245813
0.17	61740
0.17	324043
0.17	305657
0.22	189755
0.22	212568
0.50	67228
0.50	197020
0.77	35169
0.50	38332
0.17	131224

run time h	total product activity g/g Cr/h
0.50	208
0.50	4676
0.50	9511
0.50	31601
1.00	21376
1.00	799
0.50	26755
0.50	9331